#8

B. Bunner

1647

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/655,272

DATE: 06/15/2001
TIME: 17:23:49

Input Set : A:\138300.app
Output Set: N:\CRF3\06152001\I655272.raw

ENTERED

<110> APPLICANT: HONORE, ERIC
FINK, MICHEL
LAZDUNSKI, MICHEL
LESAGE, FLORIAN
DUPRAT, FABRICE
<120> TITLE OF INVENTION: MECHANOSENSITIVE MAMMALIAN POTASSIUM CHANNELS
ACTIVATABLE BY POLYUNSATURATED FATTY ACIDS AND THE USE
OF SAID CHANNELS IN DRUG SCREENING
<130> FILE REFERENCE: 1383-00
<140> CURRENT APPLICATION NUMBER: 09/655,272
<141> CURRENT FILING DATE: 2000-09-05
<150> PRIOR APPLICATION NUMBER: PCT/FR99/00404
<151> PRIOR FILING DATE: 1999-02-23
<150> PRIOR APPLICATION NUMBER: FR 98/02725
<151> PRIOR FILING DATE: 1998-03-05
<160> NUMBER OF SEQ ID NOS: 5
<170> SOFTWARE: PatentIn Ver. 2.1
<210> SEQ ID NO: 1
<211> LENGTH: 1757
<212> TYPE: DNA
<213> ORGANISM: Unknown Sequence
<220> FEATURE:
<221> NAME/KEY: CDS
<222> LOCATION: (284)..(1477)
<220> FEATURE:
<223> OTHER INFORMATION: Description of Unknown Sequence: DNA encoding TRAAK
<400> SEQUENCE: 1

```
ccacgcgtcc gcggacgcgt gggtcgccca cgcgtccggt ggcggctgtc ctgagccccg 60
ggccagctga tgtccaggtt agggcagcgt tggggcccca atcccagcct ggaaggttgg 120
acttcacgtc gacccttctc tgagtcttct gccactcact ggcctggaca agacagcatt 180
ggggagccca gaggctgcag gtgcagtgac cactgctccc caggagctcc ctgctccttc 240
ttcccaggca ggaagtggag ctggacctgc ctctggaagg acc atg cgc agc acc   295
                                                Met Arg Ser Thr
                                                 1

aca ctc ctg gct ctg ctg gca ctg gtg ctg ctt tac ttg gta tct ggg   343
Thr Leu Leu Ala Leu Leu Ala Leu Val Leu Leu Tyr Leu Val Ser Gly
  5                  10                  15                  20

gct cta gtg ttc cag gct ctg gag cag cct cac gag cag cag gct cag   391
Ala Leu Val Phe Gln Ala Leu Glu Gln Pro His Glu Gln Gln Ala Gln
                 25                  30                  35

aag aaa atg gat cat ggc cga gac cag ttt ctg agg gac cat ccc tgt   439
Lys Lys Met Asp His Gly Arg Asp Gln Phe Leu Arg Asp His Pro Cys
             40                  45                  50

gtg agc cag aag agc ctg gag gat ttc atc aag ctc ctg gtt gaa gcc   487
Val Ser Gln Lys Ser Leu Glu Asp Phe Ile Lys Leu Leu Val Glu Ala
         55                  60                  65

ctg gga ggg ggc gca aac cca gaa acc agc tgg acc aat agc agc aac   535
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/655,272

DATE: 06/15/2001
TIME: 17:23:49

Input Set : A:\138300.app
Output Set: N:\CRF3\06152001\I655272.raw

```
70 Leu Gly Gly Gly Ala Asn Pro Glu Thr Ser Trp Thr Asn Ser Ser Asn
71      70                  75                  80
73 cac tca tca gct tgg aac ctg ggc agc gcc ttc ttt ttc tcg ggg acc   583
74 His Ser Ser Ala Trp Asn Leu Gly Ser Ala Phe Phe Phe Ser Gly Thr
75  85                  90                  95                  100
77 atc atc act acc atc ggc tat ggc aat ata gtc tta cac aca gat gcc   631
78 Ile Ile Thr Thr Ile Gly Tyr Gly Asn Ile Val Leu His Thr Asp Ala
79                  105                 110                 115
81 ggg cgt ctc ttt tgt atc ttc tat gca ctg gtg ggg atc cca ctg ttc   679
82 Gly Arg Leu Phe Cys Ile Phe Tyr Ala Leu Val Gly Ile Pro Leu Phe
83              120                 125                 130
85 ggg atg ctg ctg gcg gga gtc ggg gac cgg ctg ggc tcc tct ctg cgc   727
86 Gly Met Leu Leu Ala Gly Val Gly Asp Arg Leu Gly Ser Ser Leu Arg
87          135                 140                 145
89 cgg ggc atc ggc cac atc gaa gca atc ttc ttg aag tgg cat gtg cca   775
90 Arg Gly Ile Gly His Ile Glu Ala Ile Phe Leu Lys Trp His Val Pro
91      150                 155                 160
93 ccg ggg ctg gtg aga agt ctg tcc gca gtg ctc ttc ctg ctg atc ggc   823
94 Pro Gly Leu Val Arg Ser Leu Ser Ala Val Leu Phe Leu Leu Ile Gly
95 165                 170                 175                 180
97 tgc ctg ctc ttt gtc ctc act cct acc ttc gtg ttc tcc tac atg gag   871
98 Cys Leu Leu Phe Val Leu Thr Pro Thr Phe Val Phe Ser Tyr Met Glu
99                  185                 190                 195
101 agc tgg agc aag tta gaa gcc atc tac ttt gtt ata gtg act ctc acc   919
102 Ser Trp Ser Lys Leu Glu Ala Ile Tyr Phe Val Ile Val Thr Leu Thr
103             200                 205                 210
105 act gta ggc ttt ggc gat tat gta ccc ggc gat ggc acc ggg cag aac   967
106 Thr Val Gly Phe Gly Asp Tyr Val Pro Gly Asp Gly Thr Gly Gln Asn
107         215                 220                 225
109 tct cca gcc tac cag ccg ctg gtg tgg ttc tgg atc ttg ttt ggc cta   1015
110 Ser Pro Ala Tyr Gln Pro Leu Val Trp Phe Trp Ile Leu Phe Gly Leu
111     230                 235                 240
113 gcc tac ttc gcc tca gtg ctc acc acc atc ggc aac tgg ttg cga gca   1063
114 Ala Tyr Phe Ala Ser Val Leu Thr Thr Ile Gly Asn Trp Leu Arg Ala
115 245                 250                 255                 260
117 gtg tcc cgc cga act cgg gca gag atg ggt ggc cta acg gca cag gct   1111
118 Val Ser Arg Arg Thr Arg Ala Glu Met Gly Gly Leu Thr Ala Gln Ala
119                 265                 270                 275
121 gct agc tgg acc ggc aca gtg aca gcg cga gtg acc cag cga act ggg   1159
122 Ala Ser Trp Thr Gly Thr Val Thr Ala Arg Val Thr Gln Arg Thr Gly
123             280                 285                 290
125 ccc agc gcc ccg ccg cca gag aag gag caa cca ctc ctg ccc tcc tct   1207
126 Pro Ser Ala Pro Pro Pro Glu Lys Glu Gln Pro Leu Leu Pro Ser Ser
127         295                 300                 305
129 ttg ccg gca ccg cct gct gtt gtt gag cca gcc ggc agg ccc ggc tcc   1255
130 Leu Pro Ala Pro Pro Ala Val Val Glu Pro Ala Gly Arg Pro Gly Ser
131     310                 315                 320
133 cct gca ccc gca gag aag gtt gag act ccg tcc ccg ccc acg gcc tca   1303
134 Pro Ala Pro Ala Glu Lys Val Glu Thr Pro Ser Pro Pro Thr Ala Ser
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/655,272

DATE: 06/15/2001
TIME: 17:23:49

Input Set : A:\138300.app
Output Set: N:\CRF3\06152001\I655272.raw

```
135 325                 330                 335                 340
137 gct ctg gat tac ccc agt gag aat ctg gcc ttc atc gac gag tcc tca   1351
138 Ala Leu Asp Tyr Pro Ser Glu Asn Leu Ala Phe Ile Asp Glu Ser Ser
139             345                 350                 355
141 gac acg cag agt gag cgt ggc tgt gcc ctg cct cgg gct cct cgg ggt   1399
142 Asp Thr Gln Ser Glu Arg Gly Cys Ala Leu Pro Arg Ala Pro Arg Gly
143         360                 365                 370
145 cgc cgc cga ccc aac cca tcc aaa aag cct tcc aga ccc cgg ggt cct   1447
146 Arg Arg Arg Pro Asn Pro Ser Lys Lys Pro Ser Arg Pro Arg Gly Pro
147     375                 380                 385
149 ggg cga ctc cga gac aag gcc gtg ccg gtg taggggcagg atctctggac     1497
150 Gly Arg Leu Arg Asp Lys Ala Val Pro Val
151 390                 395
153 ccggatccca cgccagggct ttcgctcttg ctgatgctca ggcatgcttg gcttatttga 1557
155 ccaaagagcc gtccctcttt tgttccacgt ggttgcaacc ctgacaggag tccagtggtt 1617
157 gccaaatgcc accgctcttc cctggctggt tcttcacatc caatcatttc caaagcccac 1677
159 catccaaggc tttctgcctc gctcccctgc cggttttgac cctcacacct cacaactgtg 1737
                                                                    1757
161 cctcaaaacc tgcaccaata
164 <210> SEQ ID NO: 2
165 <211> LENGTH: 398
166 <212> TYPE: PRT
167 <213> ORGANISM: Unknown Sequence
169 <220> FEATURE:
170 <223> OTHER INFORMATION: Description of Unknown Sequence: TRAAK
172 <400> SEQUENCE: 2
173 Met Arg Ser Thr Thr Leu Leu Ala Leu Leu Ala Leu Val Leu Leu Tyr
174   1               5                  10                  15
176 Leu Val Ser Gly Ala Leu Val Phe Gln Ala Leu Glu Gln Pro His Glu
177             20                  25                  30
179 Gln Gln Ala Gln Lys Lys Met Asp His Gly Arg Asp Gln Phe Leu Arg
180         35                  40                  45
182 Asp His Pro Cys Val Ser Gln Lys Ser Leu Glu Asp Phe Ile Lys Leu
183     50                  55                  60
185 Leu Val Glu Ala Leu Gly Gly Gly Ala Asn Pro Glu Thr Ser Trp Thr
186 65                  70                  75                  80
188 Asn Ser Ser Asn His Ser Ser Ala Trp Asn Leu Gly Ser Ala Phe Phe
189                 85                  90                  95
191 Phe Ser Gly Thr Ile Ile Thr Thr Ile Gly Tyr Gly Asn Ile Val Leu
192             100                 105                 110
194 His Thr Asp Ala Gly Arg Leu Phe Cys Ile Phe Tyr Ala Leu Val Gly
195         115                 120                 125
197 Ile Pro Leu Phe Gly Met Leu Leu Ala Gly Val Gly Asp Arg Leu Gly
198     130                 135                 140
200 Ser Ser Leu Arg Arg Gly Ile Gly His Ile Glu Ala Ile Phe Leu Lys
201 145                 150                 155                 160
203 Trp His Val Pro Pro Gly Leu Val Arg Ser Leu Ser Ala Val Leu Phe
204                 165                 170                 175
206 Leu Leu Ile Gly Cys Leu Leu Phe Val Leu Thr Pro Thr Phe Val Phe
207             180                 185                 190
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/655,272

DATE: 06/15/2001
TIME: 17:23:49

Input Set : A:\138300.app
Output Set: N:\CRF3\06152001\I655272.raw

```
209 Ser Tyr Met Glu Ser Trp Ser Lys Leu Glu Ala Ile Tyr Phe Val Ile
210         195                 200                 205
212 Val Thr Leu Thr Thr Val Gly Phe Gly Asp Tyr Val Pro Gly Asp Gly
213     210                 215                 220
215 Thr Gly Gln Asn Ser Pro Ala Tyr Gln Pro Leu Val Trp Phe Trp Ile
216 225                 230                 235                 240
218 Leu Phe Gly Leu Ala Tyr Phe Ala Ser Val Leu Thr Thr Ile Gly Asn
219                 245                 250                 255
221 Trp Leu Arg Ala Val Ser Arg Arg Thr Arg Ala Glu Met Gly Gly Leu
222             260                 265                 270
224 Thr Ala Gln Ala Ala Ser Trp Thr Gly Thr Val Thr Ala Arg Val Thr
225         275                 280                 285
227 Gln Arg Thr Gly Pro Ser Ala Pro Pro Pro Glu Lys Glu Gln Pro Leu
228     290                 295                 300
230 Leu Pro Ser Ser Leu Pro Ala Pro Pro Ala Val Val Glu Pro Ala Gly
231 305                 310                 315                 320
233 Arg Pro Gly Ser Pro Ala Pro Ala Glu Lys Val Glu Thr Pro Ser Pro
234                 325                 330                 335
236 Pro Thr Ala Ser Ala Leu Asp Tyr Pro Ser Glu Asn Leu Ala Phe Ile
237             340                 345                 350
239 Asp Glu Ser Ser Asp Thr Gln Ser Glu Arg Gly Cys Ala Leu Pro Arg
240         355                 360                 365
242 Ala Pro Arg Gly Arg Arg Arg Pro Asn Pro Ser Lys Lys Pro Ser Arg
243     370                 375                 380
245 Pro Arg Gly Pro Gly Arg Leu Arg Asp Lys Ala Val Pro Val
246 385                 390                 395
249 <210> SEQ ID NO: 3
250 <211> LENGTH: 336
251 <212> TYPE: PRT
252 <213> ORGANISM: Unknown Sequence
254 <220> FEATURE:
255 <223> OTHER INFORMATION: Description of Unknown Sequence: TWIK
257 <400> SEQUENCE: 3
258 Met Leu Gln Ser Leu Ala Gly Ser Ser Cys Val Arg Leu Val Glu Arg
259   1               5                  10                  15
261 His Arg Ser Ala Trp Cys Phe Gly Phe Leu Val Leu Gly Tyr Leu Leu
262             20                  25                  30
264 Tyr Leu Val Phe Gly Ala Val Val Phe Ser Ser Val Glu Leu Pro Tyr
265         35                  40                  45
267 Glu Asp Leu Leu Arg Gln Glu Leu Arg Lys Leu Lys Arg Arg Phe Leu
268     50                  55                  60
270 Glu Glu His Glu Cys Leu Ser Glu Gln Gln Leu Glu Gln Phe Leu Gly
271 65                  70                  75                  80
273 Arg Val Leu Glu Ala Ser Asn Tyr Gly Val Ser Val Leu Ser Asn Ala
274                 85                  90                  95
276 Ser Gly Asn Trp Asn Trp Asp Phe Thr Ser Ala Leu Phe Phe Ala Ser
277             100                 105                 110
279 Thr Val Leu Ser Thr Thr Gly Tyr Gly His Thr Val Pro Leu Ser Asp
280         115                 120                 125
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/655,272

DATE: 06/15/2001
TIME: 17:23:49

Input Set : A:\138300.app
Output Set: N:\CRF3\06152001\I655272.raw

```
282 Gly Gly Lys Ala Phe Cys Ile Ile Tyr Ser Val Ile Gly Ile Pro Phe
283     130                 135                 140
285 Thr Leu Leu Phe Leu Thr Ala Val Val Gln Arg Ile Thr Val His Val
286 145                 150                 155                 160
288 Thr Arg Arg Pro Val Leu Tyr Phe His Ile Arg Trp Gly Phe Ser Lys
289                 165                 170                 175
291 Gln Val Val Ala Ile Val His Ala Val Leu Leu Gly Phe Val Thr Val
292             180                 185                 190
294 Ser Cys Phe Phe Phe Ile Pro Ala Ala Val Phe Ser Val Leu Glu Asp
295         195                 200                 205
297 Asp Trp Asn Phe Leu Glu Ser Phe Tyr Phe Cys Phe Ile Ser Leu Ser
298     210                 215                 220
300 Thr Ile Gly Leu Gly Asp Tyr Val Pro Gly Glu Gly Tyr Asn Gln Lys
301 225                 230                 235                 240
303 Phe Arg Glu Leu Tyr Lys Ile Gly Ile Thr Cys Tyr Leu Leu Leu Gly
304                 245                 250                 255
306 Leu Ile Ala Met Leu Val Val Leu Glu Thr Phe Cys Glu Leu His Glu
307             260                 265                 270
309 Leu Lys Lys Phe Arg Lys Met Phe Tyr Val Lys Lys Asp Lys Asp Glu
310         275                 280                 285
312 Asp Gln Val His Ile Ile Glu His Asp Gln Leu Ser Phe Ser Ser Ile
313     290                 295                 300
315 Thr Asp Gln Ala Ala Gly Met Lys Glu Asp Gln Lys Gln Asn Glu Pro
316 305                 310                 315                 320
318 Phe Val Ala Thr Gln Ser Ser Ala Cys Val Asp Gly Pro Ala Asn His
319                 325                 330                 335
322 <210> SEQ ID NO: 4
323 <211> LENGTH: 370
324 <212> TYPE: PRT
325 <213> ORGANISM: Unknown Sequence
327 <220> FEATURE:
328 <223> OTHER INFORMATION: Description of Unknown Sequence: TREK
330 <400> SEQUENCE: 4
331 Met Ala Ala Pro Asp Leu Leu Asp Pro Lys Ser Ala Ala Gln Asn Ser
332   1               5                  10                  15
334 Lys Pro Arg Leu Ser Phe Ser Ser Lys Pro Thr Val Leu Ala Ser Arg
335             20                  25                  30
337 Val Glu Ser Asp Ser Ala Ile Asn Val Met Lys Trp Lys Thr Val Ser
338         35                  40                  45
340 Thr Ile Phe Leu Val Val Val Leu Tyr Leu Ile Ile Gly Ala Ala Val
341     50                  55                  60
343 Phe Lys Ala Leu Glu Gln Pro Gln Glu Ile Ser Gln Arg Thr Thr Ile
344 65                  70                  75                  80
346 Val Ile Gln Lys Gln Thr Phe Ile Ala Gln His Ala Cys Val Asn Ser
347                 85                  90                  95
349 Thr Glu Leu Asp Glu Leu Ile Gln Gln Ile Val Ala Ala Ile Asn Ala
350             100                 105                 110
352 Gly Ile Ile Pro Leu Gly Asn Ser Ser Asn Gln Val Ser His Trp Asp
353         115                 120                 125
```

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/655,272

DATE: 06/15/2001
TIME: 17:23:50

Input Set : A:\138300.app
Output Set: N:\CRF3\06152001\I655272.raw